

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of

Amendment of Part 95 of the
Commission's Rules to Establish
a Very Short Distance
Two-way Voice Radio Service

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WT Docket No. 95-102
RM-8499

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To: The Commission

COMMENTS

The Radio Shack Division of Tandy Corporation (Tandy), pursuant to Section 1.415 of the Commission's rules,¹ respectfully submits its Comments on the Notice of Proposed Rule Making (NPRM) in the captioned proceeding.² Tandy enthusiastically supports the Commission's proposal to establish a new Family Radio Service (FRS) as described in the NPRM.³

The FRS will provide low cost, high quality, short-range communications capabilities not afforded by any existing or proposed radio service. Tandy envisions that the

1. 47 C.F.R. § 1.415.

2. NPRM released August 2, 1995, FCC 95-261, 10 FCC Rcd 8235 (1995).

3. Tandy initially proposed the establishment of the FRS in its petition for rule making filed on July 20, 1994. See FCC Public Notice Report No. 2023, July 26, 1994.

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FRS will enable millions of Americans -- especially small groups such as families, friends and colleagues -- to maintain close contact with only a modest investment.⁴ With a transmitter power of just 500 milliwatts, a palm-sized FRS unit will provide clear, reliable communications for only pennies using small, dry cell batteries. With its superior FM communications quality in the Ultra High Frequency (UHF) portion of the radio spectrum, the FRS will enable individuals to maintain close contact in myriad situations. The FRS will provide all of these benefits to the public without the burdensome licensing and technical requirements that often deter potential users from many existing radio services.

The Commission (NPRM ¶ 4) proposes to establish the FRS without allocating new spectrum and with no discernable impact on present radio service users. The FRS will result in more efficient spectrum usage by adding new users on the seven unused and seven underutilized interstitial channels in the General Mobile Radio Service (GMRS) spectrum:

<u>Assigned GMRS Interstitial Channels</u>	<u>Unassigned GMRS Interstitial Channels</u>
462.5625 MHz	467.5625 Mhz
462.5875 MHz	467.5875 MHz
462.6125 MHz	467.6125 MHz
462.6375 MHz	467.6375 MHz
462.6625 MHz	467.6625 MHz
462.6875 MHz	467.6875 MHz
462.7125 MHz	467.7125 MHz

4. The cost of FRS transceivers is projected to be in the \$100-150 range.

To avoid burdening FRS users (and Commission staff) with an unwieldy licensing scheme, the Commission wisely proposes to regulate the usage of FRS units through technical standards and type certification. See NPRM ¶ 9. Just as unlicensed "CB has introduced millions of people to the benefits of two-way radio," NPRM n.18, so too will unlicensed FRS. Tandy is confident that the Commission's certification procedures will ensure that FRS equipment does not cause harmful interference.⁵

The Commission proposes to regulate operation of FRS equipment through "four simple operating rules." NPRM ¶ 9. These rules would address eligibility and responsibility, authorized locations, types of communications, and equipment requirements (proposed FRS Rules 1-4, respectively). Tandy strongly supports these rules and particularly subsection c of proposed FRS Rule 4 ("FRS units") which prohibits individuals from "attach[ing] any antenna, power amplifier, or other apparatus to an FRS unit that has not been FCC certified as part of that FRS unit." Significantly, these prohibitions on external antennae⁶ and power amplifiers will help ensure that FRS units will not cause harmful

5. See 47 C.F.R. §§ 2.1031-2.1045 (certification procedures). Revised Section 95.605 of the Commission's rules provides that "Any entity may request type acceptance or [emphasis added] certification for its transmitter in one of the Personal Radio Services, following the procedures in Part 2 of this chapter." Since FRS will be classified as a Personal Radio Service, one could interpret Revised Section 95.605 as permitting either type acceptance or certification of FRS equipment. It appears, however, that the Commission only intends that its certification procedures apply to FRS equipment. See proposed new Section 95.603(d) ("Each FRS unit . . . must be certified for use in the FRS in accordance with Subpart J of Part 2 of this chapter.").

6. Revised Section 96.645 provides that "The antenna of each FRS unit . . . must be an integral part of the transmitter . . . must have no gain . . . and must be vertically

(continued...)

interfere to other users of the 462 MHz interstitial GMRS frequencies. In addition, the line-of-sight propagation characteristics of UHF², the low power of FRS transmitters (just 500 milliwatts), and the capture effect⁷ of FRS's F3E FM emission type will virtually preclude interference with GMRS users of the 462 MHz interstitial channels.

In its Petition for Rule Making, Tandy suggested that FRS should not be interconnected with the public switched telephone network (PSTN). Proposed Section 95.193(e) provides that "No FRS unit may be interconnected to the public switched telephone network." In the NPRM at note 30, the Commission explains that in "this proceeding, we consider interconnection to be any arrangement that allows messages transmitted by FRS stations to be connected to the public switched [telephone] network." The interconnection of the FRS with the PSTN could result in high FRS equipment prices and airtime charges, the absence of which are hallmarks of the service. Tandy concurs with the Commission that, given the availability of services already interconnected to the PSTN (and soon to be interconnected, such as PCS), "the unique niche envisioned for . . . [the FRS should] not be compromised," NPRM ¶12, through interconnection with the PSTN.

6.(...continued)

polarized." These three antenna restrictions further ensure that FRS units will not cause harmful interference.

7. Capture effect means that "the strongest signal received on a frequency is the only signal that is demodulated by an FM receiver tuned to that frequency." NPRM n.23. According to the American Radio Relay League 1993 Handbook (70th ed.) at p. 18-21, "The loudest signal received, even if it is only two or three times stronger than other stations on the same frequency, will be the only transmission demodulated." Since GMRS transmitters typically operate at 5 watts, while FRS transmitters will operate at 500 milliwatts, there will be little possibility of harmful interference.

Tandy supports the Commission's proposal to allow, but not require, selective calling capabilities in FRS units. See NPFM ¶13. Tandy foresees FRS transceivers being offered from many different suppliers in a variety of configurations. These offerings will appeal to diverse user groups with differing needs. Some users will want selective calling, while others may not. Tandy believes that the Commission should not limit manufacturers to a particular selective calling protocol; by not designating a specific protocol, manufacturers will be free to incorporate the latest technologies into FRS devices.

CONCLUSION

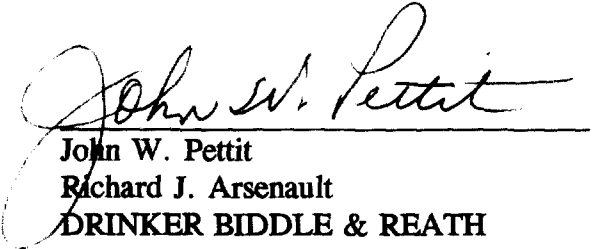
In view of the many benefits of the FRS to the public, Tandy Corporation respectfully requests that the Commission establish a new Family Radio Service as outlined in its Notice of Proposed Rule Making.

October 2, 1995

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Esther Chambers, hereby certify that on the 2nd day of October 1995 I caused a copy of the attached Comments of Tandy Corporation to be served by hand delivery to the following:

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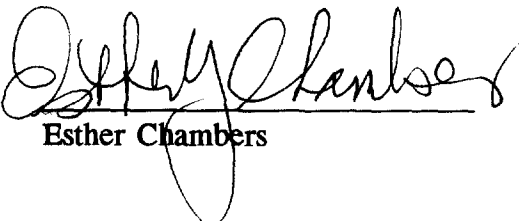
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